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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/560,810

12/15/2005

Yoshiharu Kobayashi

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EXAMINER

BIBBINS, LATANYA

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2627

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/560,810	Applicant(s) KOBAYASHI ET AL.	
	Examiner LaTanya Bibbins	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-56 is/are pending in the application.
- 4a) Of the above claim(s) 34-52, 55 and 56 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-33, 53 and 54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Preliminary Amendment

1. Receipt is acknowledged of the preliminary amendment filed on December 15, 2005. In the amendment, claims 1-28 were canceled and claims 29-56 were added. Currently claims 29-56 are pending.

Election/Restrictions

2. Applicant's election of Species D in the reply filed on April 2, 2009 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election **without** traverse (MPEP § 818.03(a)).

3. Claims 34-52, 55 and 56 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 2, 2009.

Priority

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

5. The disclosure is objected to because of the following informalities:

- a. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claims 29-33, 53 and 54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claims 29 and 53 recite the limitation "the transparent planar disk base member." There is insufficient antecedent basis for this limitation in the claim.

Dependent claims 30-33 and 54 do not resolve the 35 U.S.C. 112 second paragraph issues of independent claims 29 and 53 recited above and are therefore rejected as incorporating the deficiencies of a claim upon which they depend.

Claim 53 recites the wavefront controlling device "**time-sharingly**" controlling the wavefront of the laser beam irradiated onto the recording layer. It is unclear what is meant by the term "time-sharingly." In the interest of compact prosecution, examiner will interpret claim 53 as "the wavefront controlling device controlling the wavefront of the laser beam irradiated onto the recording layer."

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. **Claims 29 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Matsumoto et al. (US PGPub Number 2004/0037196 A1).**

Regarding claim 29, Matsumoto discloses an optical disk apparatus (see Figures 4 and 12-14) comprising: a light source (element 112 of Figures 12-14) which irradiates a laser beam onto a recording layer of an optical disk by way of a disk base member to form a focusing spot on the recording layer (see the transparent substrate and recording layers of Figure 4, layers 2 and 3 respectively), the optical disk having the transparent planar disk base member (Figure 4 element 2), the recording layer formed on the disk base member (Figure 4 element 3), and a reflecting layer in a certain positional relation to the recording layer (Figure 4 element 5); a photo detector which receives a reflected beam from the reflecting layer (see elements 113A–D in Figures 12-14 and the corresponding discussion in paragraphs [0134]-[0137]); and a tilt detecting means which detects tilt of the optical disk by using an output from the photo detector (see element 95 of Figures 12-14 and the corresponding discussion in paragraphs [0067] and [0134]-[0137]).

Regarding claim 30, Matsumoto discloses wherein the recording layer is formed closer to an incident surface of the optical disk where the laser beam is incident than the reflecting layer (see Figure 4 and the discussion in paragraph [0061] regarding the configurations of the recording medium).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (US PGPub Number 2004/0037196 A1) in view of Saimi et al. (US Patent Number 6,430,137 B1).

Regarding claim 31, Matsumoto discloses the optical disk apparatus according to claim 29 as noted in the 35 U.S.C. 102(e) rejection above but does not specifically disclose an aberration cancelling means formed on an optical path for guiding the reflected beam to the photo detector.

Saimi however, discloses an aberration canceling means which is formed on an optical path for guiding the reflected beam to the photo detector to cancel a defocus aberration and a spherical aberration of the reflected beam (see Figure 1 element 104 and the discussion in column 9 line 11 – column 12 line 42 regarding the wavefront transformer used to cancel aberrations).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine incorporate the teachings of Saimi into that of Matsumoto. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to improve the properties of the focused light beam by correcting aberration in real-time and eventually achieve favorable optical recording properties and a favorable reproduction signal (as suggested by Saimi in column 4 lines 63-67).

Regarding claim 32, the combination of Matsumoto and Saimi disclose the optical disk apparatus according to claim 31. Saimi further discloses wherein the aberration canceling means includes a wavefront controlling device which controls a wavefront of the reflected beam (see Figure 1 element 104 and the discussion in column 9 line 11 – column 12 line 42 regarding the wavefront transformer).

12. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (US PGPub Number 2004/0037196 A1) in view of Saimi et al. (US Patent Number 6,430,137 B1), as applied to claim 31 above, and further in view of Mizuno et al. (US PGPub Number 2004/0114494 A1).

Regarding claim 33, the combination of Matsumoto and Saimi disclose the optical disk apparatus according to claim 31. Matsumoto and Saimi fail to specifically disclose, while Mizuno discloses wherein the aberration canceling means includes a condenser lens which focuses the reflected beam on the photo detector, and a lens

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moving means which moves the condenser lens (see the discussion in paragraphs [0152] and [0155]-[0157]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Matsumoto and Saimi with Mizuno. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to improve the quality of reproduction signals as suggested by Mizuno in paragraph [0157].

13. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (US PGPub Number 2004/0037196 A1) in view of Kim et al. (US PGPub Number 2002/0018435 A1).

Regarding claim 53, Matsumoto discloses an optical disk apparatus (see Figures 4 and 12-14) comprising: a light source (element 112 of Figures 12-14) which irradiates a laser beam onto a recording layer of an optical disk by way of a disk base member to form a focusing spot on the recording layer (see the transparent substrate and recording layers of Figure 4, layers 2 and 3 respectively), the optical disk having the transparent planar disk base member (Figure 4 element 2), and the recording layer formed on the disk base member (Figure 4 element 3); a photo detector which receives a reflected beam from the recording layer (see elements 113A-D in Figures 12-14 and the corresponding discussion in paragraphs [0134]-[0137]), and a tilt detecting means which detects tilt of the optical disk by detecting a tilt aberration or a coma aberration included in the reflected beam by using an output from the photo detector (see element

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95 of Figures 12-14 and the corresponding discussion in paragraphs [0067] and [0134]-[0137]).

Matsumoto, however fails to disclose, while Kim discloses a wavefront controlling device which controls a wavefront of the laser beam irradiated onto the recording layer (see the discussion in paragraph [0078]); the wavefront controlling device time-sharingly controlling the wavefront of the laser beam irradiated onto the recording layer in such a manner that a defocus aberration of a predetermined amount or a spherical aberration of a predetermined amount is included (see the discussion in paragraphs [0078]-[0082]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Matsumoto and Kim. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to provide an optical pickup with a high light efficiency and an optical pickup that is compatible with high-density recording media and with relatively low-density recording media using different wavelengths of light (as suggested by Kim in paragraph [0017]).

14. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (US PGPub Number 2004/0037196 A1) in view of Kim et al. (US PGPub Number 2002/0018435 A1), as applied to claim 53 above, and further in view of Saimi et al. (US Patent Number 6,430,137 B1).

Regarding claim 54, the combination of Matsumoto and Kim disclose the optical disk apparatus according to claim 53 but do not specifically disclose an aberration cancelling means formed on an optical path for guiding the reflected beam to the photo detector

Saimi however, discloses an aberration canceling means which is formed on an optical path for guiding the reflected beam reflected from the recording layer to the photo detector to cancel a defocus aberration and a spherical aberration of the reflected beam (see Figure 1 element 104 and the discussion in column 9 line 11 – column 12 line 42 regarding the wavefront transformer used to cancel aberrations).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine incorporate the teachings of Saimi into that of Matsumoto and Kim. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to improve the properties of the focused light beam by correcting aberration in real-time and eventually achieve favorable optical recording properties and a favorable reproduction signal (as suggested by Saimi in column 4 lines 63-67).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaTanya Bibbins whose telephone number is (571)270-1125. The examiner can normally be reached on Monday through Friday 7:30 am - 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LaTanya Bibbins/
Examiner, Art Unit 2627

/Wayne Young/
Supervisory Patent Examiner, Art Unit 2627